IT PROJECT EVALUATION

Project Tracking No.:_____

P-044-FY03-ITD

Return on Investment Program Funding Application (FY 2003 Request)

This is an electronic template. Please enter your responses on this document. Only electronic submittals of this template will be accepted. Proposals submitted after the designated due date may not receive funding consideration.
FINAL AUDIT REQUIRED: The Enterprise Quality Assurance Office of the Information Technology Department is required to perform a final project outcome audit, after implementation, for all Pooled Technology funded projects.

SECTION I: PROPOSAL

Date: 7/15/01

Agency Name: Information Technology Department (ITD)

Project Name: Public Key Infrastructure (PKI)

Expenditure Name:

Agency Manager: Ken Adrian

Agency Manager Phone Number / E-mail: (515) 725-0367 / Ken.Adrian@its.state.ia.us

Executive Sponsor (Agency Director or Designee): Richard J. Varn

Request For ROI Application Waiver:

Agencies are required to complete this funding application when requesting funds for any project, any IT expenditure costing over $100,000, or any non-routine IT expenditure. If you feel there is compelling reason to waive this requirement, please provide (in the box provided below) a brief description of the project or expenditure, the budget amount, and a rationale for the waiver request. Until a decision is made regarding your waiver request, it is not necessary to complete any other portion of this application. The ITD Enterprise Quality Assurance Office will convey waiver request decisions within five working days of receipt.

Explanation:

A. Project or Expenditure Rationale

Is this project or expenditure necessary for compliance with a Federal standard, initiative, or statute? ☐ **YES** (If "YES," explain) ☒ **NO**

Explanation:

Is this project or expenditure required by State statute? ☒ **YES** (If "YES," explain) ☐ **NO**

Explanation: House File 2205 (signed into law on May 15, 2000) stipulates that most Executive Branch agencies, departments, boards, commissions, authorities, and institutions must "send and accept electronic records and electronic signatures to and from other persons and otherwise create, generate, communicate, store, process, use, and rely upon electronic records and signatures" by July 1, 2003, unless a waiver from the Department of Management is obtained. The solution is a public key infrastructure (PKI) which will be instrumental in making this a reality.

Does this project or expenditure meet a health, safety or security requirement?
☒ **YES** (If "YES," explain) ☐ **NO**

Explanation: Not only does PKI help meet security requirements, it will be generating security requirements for the State of Iowa Enterprise.

Is this project or expenditure necessary for compliance with an enterprise technology standard?
☒ **YES** (If "YES," explain) ☐ **NO**

Explanation: PKI will be establishing enterprise technology standards; specifically, standards that deal with security of information and information systems.

Is this project or expenditure consistent with meeting the goals and objectives of the State's strategic plans?
☒ **YES** (If "YES," explain) ☐ **NO**

Explanation: PKI is essential in meeting the State of Iowa's Digital Government and E-Commerce goals. Without effective security controls and practices in place, the goal of "If you have to wait in line it should be on-line" will ultimately fail. In the absence of an enterprise program, individual programs will implement security independently and at differing levels of assurance; an enterprise program provides a cohesive security umbrella, ensuring that security efforts meet a consistent security policy, are adequate, and are cost-effective. A single State of Iowa PKI will be essential in meeting these goals by making the promises of digital signatures and true authentication reality. A PKI will enable users, including State employees, agencies, business partners, and citizens, to conduct business with the State in an effective, safe, and secure manner. Critical information will be available to authorized users when needed, and it will be protected from disclosure and unauthorized change. State agencies have many electronic plans and goals, including secure e-mail, secure web browser and server connections, virtual private networks, form signing, file encryption, and wireless applications; a State of Iowa PKI will be a key enabler of achieving these goals.

Is this a "research and development" project or expenditure? ☐ **YES** (If "YES," explain) ☒ **NO**

Explanation: This is not a research and development (R&D) project; however, some R&D will be conducted by necessity during its performance.

B. Project or Expenditure Summary

1. Provide a pre-project or pre-expenditure (before implementation) and a post-project or post-expenditure (after implementation) description of the impacted system or process. In particular, note if the project or expenditure makes use of information technology in reengineering traditional government processes.

Response: See Attachment A.

2. Summarize the extent to which the project or expenditure improves customer service to Iowa citizens or within State government. Included would be such items as improving the quality of life, reducing the government hassle factor, providing enhanced services, improving work processes, etc.

Response: The result of the PKI initiative will be an enterprise with enhanced security and appropriate access to all the systems that make up the enterprise, thereby benefiting the agencies, their partners, and their customers. Important information will be available to authorized users while also being protected from disclosure and unauthorized change. This is important not only to State government, but also to its citizens and business partners.

3. Identify the main project or expenditure stakeholders and summarize the extent to which each, especially citizens, is impacted. In particular, note if the project or expenditure helps reconnect Iowans to State government.

Response: A program of this magnitude has many stakeholders; it is not unreasonable to identify all State citizens, agencies, and business partners as stakeholders that will be impacted by the project. All present Iowa citizens, and many past citizens, have personal information that is stored, processed, and/or disseminated by State government computer systems. They all have a stake in the protection of that information. All agencies, even non-participating agencies, will benefit by the increased security of the enterprise, since most of these agencies either share some of the same architecture or have information that is stored on Iowa mainframes or other agency systems. In today's interconnected world, if a vulnerability leads to a compromise in one system, it may lead to unintended privileged access to information on other systems. If business partners are to conduct business electronically with the State, it is important that their interests are protected as well.

SECTION II: PROJECT ADMINISTRATION

A. Agency Information

1. Project Executive Sponsor Responsibilities: The sponsor must have the authority to ensure that adequate resources are available for the entire project, that there is commitment and support for the project, and that the organization will achieve successful project implementation.

Response: No response required.

2. Organization Skills:
   a. List the project management skills necessary for successful project implementation
   b. List the project management skills available within the agency
   c. List the source(s) of project management skills lacking within the agency
   d. Summarize relevant agency project management experience and results

Response:

a. The Chief Information Officer (CIO) is the sponsor of the project. With adequate funding, the CIO will ensure that adequate resources are made available for the project. Unwavering support for the project has been committed by both the CIO and the Information Technology Department (ITD). Part of the CIO's responsibilities are to promote the project to the Governor and the Legislature, while solving any disputes that may arise that the Chief Information Security Officer (CISO) will be unable to resolve.

The skills necessary for successful project implementation include the following:

- Project management
- Public key infrastructure (PKI) planning and implementation
- PKI policy
- PKI management
- PKI operations
- PKI application development
- Marketing (for PKI applications)

b. The project management and non-PKI skills exist for the most part in the agency; however, they reside in an extremely limited number of people and in differing levels of expertise. Moreover, only one person in the agency is dedicated to the security program, and part of his responsibilities include the security of ITD and PKI. Only two individuals are responsible for the PKI portion; both are relatively knowledgeable of PKI, but neither one has been involved in a PKI implementation, and neither one is dedicated full-time to PKI.

c. For this program to succeed, additional personnel are necessary. At this time, it has been indicated that contractors will have to be used to supplement existing agency expertise. Part of the funding currently being requested will be used to hire competent contractors to assist with the security and PKI implementations. Over time, it is anticipated that FTEs will be made available and full-time State security employees will be hired when possible.

B. Project Information

1. History:
   a. Is this project the first part of a future, larger project? If so, please explain.
   b. Is this project a continuation of a previously begun project? If so, please explain project history, current status, and results.

Response:

a. and b. ITD has been identified as the entity to integrate and standardize E-Commerce functions across the enterprise. A State of Iowa PKI will enable E-Commerce in the State of Iowa providing for enhanced access to government services as directed in House File 2205. Other goals include:
· Identifying opportunities for agencies to collaborate on PKI purchases, maintenance, and training, saving money through economies of scale while increasing security.
· Protecting the State of Iowa from liabilities and embarrassment associated with the loss/damage/exposure of sensitive and confidential data.
· Promoting the exchange of information among State of Iowa organizations to facilitate the development of knowledge and understanding regarding PKI.
· Establish a relationship with a PKI vendor as a certificate authority and solutions provider.

Program objectives are to:
· Develop, implement, and monitor the PKI.
· Educate and train users in security awareness.
· Integrate security into each system life cycle.
· Explore and apply technology.
· Assess the security posture of the enterprise and agency systems.
· Ensure security controls are designed into enterprise and agency systems.
· Detect external and internal attacks, as well as internal misuse of systems.
· Provide a method for State agencies to provide digital signatures to staff.
· Provide a method for securing e-mail across the enterprise.

These goals and objectives contribute to the ITD's mission of providing quality information services and technology standards for State agencies.

2. Expectations: Describe the primary purpose or reason for the project.

Response: The State of Iowa, in meeting its responsibilities to supply effective State services, plans to provide greater access and new services to State agencies, citizens, and business partners using new and existing State information systems. Sharing and making information available at the enterprise level presents both opportunities and challenges. The State of Iowa has the opportunity to become a leader in providing access to State information at the inter-agency and public levels. The challenge is to ensure that communications, information technology, tools, systems, and personnel provide a non-intrusive security environment while maintaining confidentiality, integrity, availability, and accountability of the information and information resources. This environment must provide reliable and secure information, in any required form, where and when needed.

In today's State of Iowa Enterprise, many systems are interconnected in some way. Because of this, security vulnerabilities in one system have an adverse effect on the security posture of other interfacing systems. Therefore, enterprise security is defined by the aggregate security posture of the State systems comprising the enterprise. The problem is, while many State agencies have a high degree of technical capability in controlling and protecting their information technology assets, this level of competence is not consistent throughout the enterprise, contributing to an unpredictable enterprise security posture.

The implementation of PKI is designed to do several things. It will increase the level of consistency in agency security programs by developing and helping the agencies to conform to enterprise security policies, standards, and guidelines. It will plan, develop, and implement a State of Iowa Public Key Infrastructure (PKI), facilitate communication among the agencies concerning security vulnerabilities, incidents, and knowledge, develop security-related checklists and procedures, as well as identify, plan for, fund, and implement enterprise-level security technologies.

The result will be an enterprise with enhanced security and appropriate access to all the systems that make up the enterprise, thereby benefiting the agencies, their partners, and their customers. Important information will be available to authorized users, while also being protected from disclosure and unauthorized change. This is important not only to State government, but also to its citizens and business partners.

3. Measures: Describe the criteria that will be used to determine if the project is successful.

Response: PKI can be determined successful if the following items become reality:
· Consistent security policies are developed, implemented, and enforced (at both the enterprise and agency levels).
· Security is considered throughout the system life cycle.
· Security standards are developed and promulgated.
· A State of Iowa root certificate authority is configured and put into operation.
· Agency e-mail users are able to send secure e-mail by utilizing the results of the initial phase of the State of Iowa PKI.
· E-Commerce is enabled with a standard approach.

If the project fails, then the situation remains what it is today; at best, multiple ad- hoc security programs implementing security with differing levels of assurance.

4. Environment: List the project participants (i.e. single agency, multiple agencies, State government enterprise, citizens, associations, or businesses, etc.).

Response: State agencies will be actively involved in the development and implementation of the State of Iowa PKI. The program will depend upon the input and participation of the agencies. All agencies will provide input based upon their current business processes and user interaction.

IT PROJECT EVALUATION

5. Risk: Describe the project risks which may be internal or external to State government, i.e. implementing versus not implementing project, changing technology, potential cost overruns, changing citizen demand or need, etc.

Response: The project will be managed utilizing Microsoft Project software and will be consistent with the ITD project manual. Contractors will be required to provide weekly status reports and bill the State in bi-weekly increments. Changes will be fed through the office of the CISO, and most activities will be coordinated with the Information Technology Management Committee, the Executive Security Committee (to be established by the program), and/or the agencies themselves.

6. Security / Data Integrity / Data Accuracy / Information Privacy
   a. List the security requirements of the project
   b. Describe how the security requirements will be integrated into the project and tested
   c. Describe what measures will be taken to insure data integrity, data accuracy and information privacy.

Response:
a.State of Iowa security vulnerability and risk information is critical information and will be protected as such by a combination of technical and procedural security controls.
b.The final PKI provider will have to provide proof of their internal security of the certificate authority. Individual registration authorities will have to be secured according to the certificate policy and the certification practice statement. The Security Office of the ITD will be on the oversight committee for the project and their role will be to address new standards being wrought by this process, as well as, ensuring the project adheres to existing standards.

c. The standard measures that ITD noew employs will be applied to the project.

7. Project Schedule
   Describe general time lines, resources, tasks, checkpoints, deliverables, responsible parties, etc.

Response: The project schedule will be determined later in FY2002, depending upon the activities conducted during the year and the current situation.

SECTION III: TECHNOLOGY (In written detail, describe the following)

A. Current Technology Environment

1. Software (Client Side / Server Side / Midrange / Mainframe):
   a. Application software
   b. Operating system software
   c. Major interfaces to other systems, both internal and external

Response: The security portion of this project does not lend itself to readily identify the hardware and software of the current and proposed environment. This is due to three reasons. First, the program is intended to address the entire State of Iowa Enterprise comprised of many interfacing client, server, midrange, and mainframe systems. This includes all systems of all types of hardware and software, many of which are unknown at this time, in many different logical and physical environments, interfacing with both internal and external systems. Second, the program by its very nature has some unknown elements at this point. The risk management program itself must first be developed and implemented in order to determine what security features are lacking; once the deficits are identified the needs will have to be prioritized and implemented as funding permits. Third, the program isn't 100% hardware and software oriented. Much of the security program involves policy, procedures, guidelines, communication, education, and awareness.

The PKI portion will mainly affect e-mail, groupware, and forms/workflow systems including, but not limited to, Outlook and Notes mail clients running on a variety of Microsoft Windows servers and clients. E-mail will support both encryption and electronic signatures. An interface from License 2000 to the State's accounting system will be present to process money transfers and audit transactions, as well as to ITD's Payment Engine for the processing of credit card transactions.

2. Hardware (Client Side / Server Side / Mid-range / Mainframe):
   a. Platform, operating system
   b. Storage and physical environment
   c. Connectivity and bandwidth
   d. Logical and physical connectivity
   e. Major interfaces to other systems, both internal and external

Response: Please see response to III.A.1.

B. Proposed Technology Environment

1. Software (Client Side / Server side / Mid-range / Mainframe)
   a. Application software
   b. Operating system software
   c. Major interfaces to other systems, both internal and external
   d. General parameters if specific parameters are unknown or to be determined

Response: Will be determined by RFP results of FY '02

2. Hardware (Client Side / Server Side / Mid-range / Mainframe)
   a. Platform, operating system
   b. Storage and physical environment
   c. Connectivity and Bandwidth

d. Logical and physical connectivity
e. Major interfaces to other systems, both internal and external
f. General parameters if specific parameters are unknown or to be determined

Response: Will be determined by RFP results of FY '02

C. Data Elements

If the project creates a new database, provide a description of the data elements.

Response: TBD

SECTION IV: Financial Analysis

A. Budget: Enter figures and calculate (see formula below) Total Annual Prorated Cost (State Share).

$$\left[\left(\frac{Budget\ Amount}{Useful\ Life}\right)\times \%\ State\ Share\right]+\left(Annual\ Ongoing\ Cost\times \%\ State\ Share\right)=Annual\ \text{Pr}orated\ Cost$$

Budget Line Items	Budget Amount (1st Year Cost)	Useful Life (Years)	% State Share	Annual Ongoing Cost (After 1st Year)	% State Share	Annual Prorated Cost
Agency Staff	$60000	4	100%	$60000	100%	$75000
Software	$75000	4	100%	$	%	$18750
Hardware	$100000	3	100%	$	%	$33333
Training	$10000	4	100%	$	%	$2500
Facilities	$	1	%	$	%	$
Professional Services	$	4	%	$	%	$
ITD Services	$	4	%	$50000	100%	$50000
Supplies, Maint, etc.	$	1	%	$	%	$

Other (Specify)	$		1		%	$		%		$
Totals	$245000		-------		-------	$110000		------		$179583

Transfer this amount to the ROI Financial Worksheet, item “D” on page 15.

B. Funding: Enter data or provide response as requested

1. This is (pick one):
   - ☒ A Pooled Technology Fund or Reengineering Fund Request
   - ☐ An Agency IT Expenditure or Budget Request (General Fund, Road Funds, etc)
   - ☐ Other – Specify:

2. On a fiscal year basis, enter the estimated cost by funding source?

	FY03		FY04		FY05	
	Cost ($)	% Total Cost	Cost ($)	% Total Cost	Cost ($)	% Total Cost
State General Fund	$	%	$	%	$	%
Pooled Tech. Fund	$245000	100%	$	%	$	%
Federal Funds	$	%	$	%	$	%
Local Gov. Funds	$	%	$	%	$	%
Grant or Private Funds	$	%	$	%	$	%
Other Funds (Specify)	$	%	$	%	$	%
Total Project Cost	$245000	100%	$	100%	$	100%

If applicable, summarize prior fiscal year funding experience for the project / expenditure.

Response: An RFP is to be released in FY '02 to cover the initial implementation.

1. On a fiscal year basis, how much of the total ($ amount and %) project / expenditure cost would be absorbed by your agency from normal operating budgets (all funding sources)?

Response: N/A

2. Identify, list, and quantify all new annual ongoing (maintenance, staffing, etc.) related costs (State $s) that will be incurred after implementation or expenditure.

Response: $110,000 and other possible costs to be determined.

C. ROI Financial Worksheet: Respond to the following and transfer data to the ROI Financial Worksheet (see IVC11) as necessary:

1. Annual Pre-Project Cost – Quantify all actual state government direct and indirect costs (personnel, support, equipment, etc.) associated with the activity, system or process prior to project implementation. This section should be completed only if state government operations costs are expected to be reduced as a result of project implementation.

Response: TBD

2. Annual Post-Project Cost – Quantify all estimated State government direct and indirect costs associated with activity, system or process after project implementation. This section should be completed only if State government operations costs are expected to be reduced as a result of project implementation.

Response: TBD

3. State Government Benefit -- Subtract the total "Annual Post-Project Cost" from the total "Annual Pre-Project Cost." This section should be completed only if State government operations costs are expected to be reduced as a result of project implementation.

Response: TBD

4. Citizen Benefit – Quantify the estimated annual value of the project to Iowa citizens**.** This includes the "hard cost" value of avoiding expenses ("hidden taxes") related to conducting business with State government. These expenses may be of a personal or business nature. They could be related to transportation, the time expended on or waiting for the manual processing of governmental paperwork such as licenses or applications, taking time off work, mailing, or other similar expenses. As a "rule of thumb," use a value of $10 per hour for citizen time savings and $.325 per mile for travel cost savings.

Response: TBD

5. Opportunity Value/Risk or Loss Avoidance Benefit – Quantify the estimated annual non-operations benefit to State government. This could include such items as qualifying for additional matching funds, avoiding the loss of matching funds, avoiding program penalties/sanctions or interest charges, avoiding risks to health/security/safety, avoiding the consequences of not complying with State or federal laws, providing enhanced services, avoiding the consequences of not complying with enterprise technology standards, etc.

Response: TBD

6. Total Annual Project Benefit -- Add the values of all annual benefit categories.

Response: TBD

7. Total Annual Prorated Cost – It is necessary to estimate and assign a useful life figure to each cost identified in the project budget. Useful life is the amount of time that project related equipment, products, or services are utilized before they are updated or replaced. In general, the useful life of hardware is three (3) years and the useful life of software is four (4) years. Depending upon the nature of the expense, the useful life for other project costs will vary between one (1) and four (4) years. On an exception basis, the useful life of individual project elements or the project as a whole may exceed four (4) years. Additionally, the ROI calculation must include all new annual ongoing costs that are project related. Completing Section IV-A, Project Budget of the evaluation document will provide all the necessary information for this item.

Response: TBD

8. Benefit / Cost Ratio – Divide the "Total Annual Project Benefit" by the "Total Annual Project Cost." If the resulting figure is greater than one (1.00), then the annual project benefits exceed the annual project cost. If the resulting figure is less than one (1.00), then the annual project benefits are less than the annual project cost.

Response: TBD

9. ROI -- Subtract the "Total Annual Project Cost" from the "Total Annual Project Benefit" and divide by the amount of the requested State IT project funds.

Response: TBD

10. Benefits Not Readily Quantifiable -- List the project benefits which are not readily quantifiable (i.e. IT innovation, unique system application, utilization of new technology, hidden taxes, improving the quality of life, reducing the government hassle factor, meeting a strategic goal, etc.). Rate the importance of these benefits on a "1 – 10" basis, with "10" being of highest importance. Check the "Benefits Not Readily Quantifiable" box in the applicable row.

Response: The project is not being instituted as a cost saving measure. Instead it is a necessary piece of infrastructure supporting authentication activities of digital government. There are benefits in the implementation of the standards and policies surrounding a PKI including:

-- Creation of authentication standards
-- -- Citizen authentication across agency applications (8)
-- -- Decreased development time in agency applications (7)
-- -- Authentication standards will facilitate secure communications and data sharing between agencies (10)
-- -- Increased secure access for online self service applications (9)

-- Further implementation of digital signatures
-- -- Decreased paper use in government transactions (5)
-- -- Ease of valid electronic filings (6)

11. ROI Financial Worksheet

Annual Pre-Project Cost - How You Perform The Function(s) Now	
FTE Cost (salary plus benefits):	$
Support Cost (i.e. office supplies, telephone, pagers, travel, etc.):	$
Other Cost (expense items other than FTEs & support costs, i.e. indirect costs if applicable, etc.):	$
A. Total Annual Pre-Project Cost:	$
Annual Post-Project Cost – How You Propose to Perform the Function(s)	
FTE Cost:	$
Support Cost (i.e. office supplies, telephone, pagers, travel, etc.):	$
Other Cost (expense items other than FTEs & support costs, i.e. indirect costs if applicable, etc.):	$
B. Total Annual Post-Project Cost:	$
State Government Benefit (= A-B):	$
Annual Benefit Summary	
State Government Benefit:	$
Citizen Benefit:	$
Opportunity Value or Risk/Loss Avoidance Benefit:	$
C. Total Annual Project Benefit:	$
D. Annual Prorated Cost (SECTION IV-A):	$
Benefit / Cost Ratio: (C / D) =	
Return On Investment (ROI): (C – D) / Requested Project Funds) x 100 =	**%**
☒ **Benefits Not Readily Quantifiable**	

Section V: ITC Project Evaluation Criteria

Criteria and Location in Project Evaluation Document		Points
1.	Is the project a statutory requirement; legal requirement; federal or state mandate; health, safety or security requirement or issue; and/or required for compliance with the enterprise technology standards? **Location: Section I-A**	**15**
2.	Will the project improve customer service? **Location: Section I-B.2**	**15**
3.	Does the project have a direct impact on citizens? To what extent does the project help reconnect state government with Iowans? **Location: Section I-B.3**	**10**
4.	Does the project provide a sufficient tangible and/or intangible return on investment? Will it generate savings or income? **Location: Section IV-C**	**10**
5.	Does the project make use of information technology and its practical application in reengineering traditional government processes consistent with the goals and objectives of the state's strategic plans? **Location: Section I-B.1**	**10**
6.	Risk: What are the risks associated with the project? Such risks may include those internal and external to state government, the risk of doing a project, the risk of not doing a project, and the risks associated with changing technologies, potential cost overruns, and changing citizen demands and needs. **Location: Section II-B.5**	**10**
7.	Is this funding required to continue a project that was begun prior to the year funding is being requested for and does it have proven past performance? Is the funding part of a multi-year strategy? **Location: Section II-B1, IVB2**	**10**
8.	Will the project be for only one agency, multiple agencies, or the state government enterprise? **Location: Section I-B3, IIB4**	**10**
9.	Has the applicant maximized their own and other resources in the project? Is alternative funding unavailable for this project? (If no other funding available, project will not be completed without Pooled Technology funding) **Location: Section IV-B.2, IV-B.3**	**5**
10.	What is the credibility of the requester based on past performance on other projects? **Location: Section II-A.2.d**	**5**
	Total	**100**

Attachment A

The State of Iowa, in meeting its responsibilities to supply effective State services, plans to provide greater access and new services to State agencies, citizens, and business partners using new and existing State information systems. Sharing and making information available at the enterprise level presents both opportunities and challenges. The State of Iowa has the opportunity to become a leader in providing access to State information at the inter-agency and public levels. The challenge is to ensure that communications, information technology, tools, systems, and personnel provide a non-intrusive security environment while maintaining confidentiality, integrity, availability, and accountability of the information and information resources. This environment must provide reliable and secure information, in any required form, where and when needed.

In today's State of Iowa Enterprise, many systems are interconnected in some way. Because of this, security vulnerabilities in one system have an adverse effect on the security posture of other interfacing systems. Therefore, enterprise security is defined by the aggregate security posture of the State systems comprising the enterprise. The problem is, while many State agencies have a high degree of technical capability in controlling and protecting their information technology assets, this level of competence is not consistent throughout the enterprise, contributing to an unpredictable enterprise security posture.

PKI is designed to do several things. It will increase the level of consistency in agency security programs by developing and helping the agencies to conform to enterprise security policies, standards, and guidelines. It will develop and implement a State of Iowa Public Key Infrastructure (PKI), and identify, plan for, fund, and implement enterprise-level security technologies.

PKI is a technology that has emerged due to the need for enhanced security, integrity, and non-repudiation of electronic transactions. The State of Iowa, following the guidelines contained in the Uniform Electronic Transactions Act (UETA), passed UETA for Iowa, which assesses that where a transaction requires a signature, a digital signature will satisfy the requirement. Although the law does not mention PKI explicitly, PKI is widely becoming accepted as the standard for digital signatures.

The State has asserted in House File 2205 that all transactions with the State will be available electronically by July 2003. PKI will enable Iowa to realize the intent of PKI by allowing citizens, businesses, and governments to perform transactions electronically with each other.

PKI will allow a variety of entities to perform transactions electronically with the state. Possible affected transactions are:

Government to Government	• Timesheets • Purchasing • Encrypted Emails • Accounting Processes
Government to Business	• Permits, Licenses and Permission • Corporate Filings • Tax Filings • Procurements • Other Online Transactions
Government to Citizen	• Professional Licensing • Recreational Licenses • Tax Filings • Drivers Licenses • Requests for Birth, Marriage, • and Death Certificates • Other Online Transactions

Baltimore Technologies was recently contracted with the State to assist in identifying PKI needs and requirements. The following documents are available for review:

- Requirements Document
- Suggested Architecture
- Cost Analysis
- Vendor Analysis

Baltimore, through interviews with State agencies, identified major areas for PKI projects. The ITD feels that an internal State implementation of PKI will help to educate employees and set the stage for additional PKI projects. Therefore, in this initial permeation of digital signatures, the ITD will establish a relationship with a PKI vendor to act as a Certificate Authority for the State of Iowa, and then establish digital signatures for State Employees and enable secure e-mail as a pilot project. At this point, the ITD will work with the agencies to identify further PKI projects and develop a PKI roadmap.